What is claimed is:

1. A photolithographic apparatus for use in a photolithographic system for illuminating a surface of a substrate, said photolithographic apparatus comprising a cover member disposed over the substrate such that a substantially enclosed reservoir is defined between the substrate and said cover member, wherein said cover member includes a top surface contoured to form an open reservoir.

2. The photolithographic apparatus of claim 1, wherein said cover member is substantially transparent.

3. The photolithographic apparatus of claim 1, wherein said enclosed reservoir contains a first immersion fluid.

4. The photolithographic apparatus of claim 3, wherein said first immersion fluid is purified water.

5. The photolithographic apparatus of claim 1, wherein said open reservoir contains a second immersion fluid.

6. The photolithographic apparatus of claim 5, wherein said second immersion fluid is purified water.

7. The photolithographic apparatus of claim 1, further comprising a support platform for upwardly supporting the substrate.

8. An apparatus for use with a photolithographic system comprising:

a workpiece support member; and

a cover member disposed over said workpiece support member to form a substantially enclosed workpiece cell between said cover member and said workpiece support member, wherein said cover member is substantially transparent and includes an upper surface contoured to form an open reservoir.

9. The apparatus of claim 8, further comprising a workpiece disposed within said workpiece cell and vertically supported by said workpiece support member such that a gap remains between an upper surface of said workpiece and the bottom surface of said cover member.

10. The apparatus of claim 8, wherein said cover member is substantially planar and has an index of refraction greater than one.

11. The apparatus of claim 8, wherein said workpiece cell contains a first transparent fluid having an index of refraction greater than 1.

12. The apparatus of claim 8, wherein said workpiece cell further comprises fluid ingress means for filling and pressurizing said workpiece cell with a fluid.

13. The apparatus of claim 12, wherein said fluid ingress means comprises at least one fluid inlet port.

14. The apparatus of claim 8, wherein said open reservoir contains a second transparent fluid having an index of refraction greater than 1.

15. The apparatus of claim 8, further comprising a lens apparatus disposed over the cover member such that a final lens element of said lens apparatus is positioned within said open reservoir.

16. The apparatus of claim 15, wherein said final lens element is a lens cover.

17. The apparatus of claim 16, wherein said lens apparatus moves relative to said cover member in a scanning direction, said lens cover characterized as having an elongated lengthwise dimension oriented in parallel with the scanning direction.

18. The apparatus of claim 17, said lens cover further characterized as having lateral runners protruding downwardly and extending along the lengthwise dimension of said lens cover such that a lengthwise channel is formed along said bottom lengthwise surface of said lens cover.

19. The apparatus of claim 15, further comprising a workpiece disposed within said workpiece cell, and wherein said lens apparatus further includes a workpiece normal focus sensor for determining a correct vertical position of said lens apparatus with respect to said workpiece.

20. The apparatus of claim 15, wherein said lens apparatus further includes a cover member normal focus sensor for determining a correct vertical position of said lens apparatus with respect to said cover member.